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AMERICAN ANNALS OF THE DEAF.

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THE PLACE OF PHYSICAL EDUCATION IN A SCHOOL FOR THE DEAF.

THE progressive educator, possessing more advanced and broader views of the science of education than instructors of a former generation, should be fully aware that the relations of moral, mental, and physical training are basic and go hand in hand. Montague says: "'Tis not a soul, 'tis not a body, we are training up, but a man, and we ought not to divide him." Dr. Edward M. Hartwell, an authority on physical education, writes: "Then will the teacher strive to play the part of an intelligent, loyal, efficient co-worker with nature in so shaping and ordering nurture that the child shall naturally and fully develop into a healthy, vigorous, intelligent, active, God-fearing citizen of the world." The principles of physical training are applied to the whole stage of elementary education and all subjects in which the pupil has to learn to will and to do. History tells us that the nations of antiquity recognized the value of physical training as a means of developing character, and assigned it an important place in their system of education. Among both Spartans and Athenians athletics and gymnastics were organized and ordered for producing good soldiers, good citizens, and good men.

Personal experiences and observations as a schoolboy, a college student, and a physical director lead the writer to believe that a systematic course of physical training, supplemented by games and play, dancing, and athletic sports, is of permanent value to the pupils.

It seems that the meaning, ends, and importance of such physical training have not been and are not now apprehended in all our schools for the deaf. For our present purpose, physical training may be defined as "the regulated practice of some form of muscular exercise under such conditions as serve to promote the health of the organism or to develop and discipline its motor functions, either in a general or special way." It is synonymous with bodily exercise. St. Paul declared "Bodily exercise profiteth little." This might lead one to believe that the relations between body and mind are not so closely united. The term "bodily exercise" that St. Paul used, however, referred not to "muscular exercise," but rather to the exercise of asceticism or mortification of the flesh. St. Paul did not condemn gynmastics and athletic exercises in his advice.

The term "physical training," not "physical culture," should be used in the reports of schools, if the forms of muscular exercise are carefully selected and well adapted to meet the needs of the pupils. According to the definition of Dr. Hartwell, it is as follows:

"1. *Physical Education as an Expression.*

A. The term is used in—

(1) A vaguely general, uncritical, and popular sense, when it means too much, being made to include matters that belong to personal and school hygiene, *e. g.*, bathing, diet, dress, seating of pupils, ventilation.

(2) A semi-general sense, signifying exercise for the

sake of health or recreation or the prevention of mischief, when it means too little, though it is generally so used by school boards and 'educators.'

(3) A strictly scientific sense, based on a critical consideration of demonstrable physiological and psychological effects and relations. Its general and special scientific significations should be distinguished and determined.

B. Synonymous terms, *e. g.*, physical training; bodily exercise.

C. Non-synonymous terms, *e. g.*, physical culture; movement cure; society gymnastics; Delsarte exercises.

Physical Education as a Department of Science.

A. The essential, universal, necessary factor in all forms of physical training is neuro-muscular exercise. It should be critically considered in respect to—

(*a*) Its nature and effects: (1) bodily, (2) mental.

(*b*) Its aims, which may be: (1) recreative, (2) hygienic, (3) educative, (4) remedial.

(*c*) Its results, which are: (1) anatomical, (2) physiological, (3) mental, (4) moral.

B. As a branch of hygiene. Physical training serves to promote the normal growth and development of—

(1) The master tissues and organs, *i. e.*, muscles, nerves, and brain.

C. As a pedagogic discipline. Physical training helps to develop will and intelligence, *i. e.*, the power to know, do, endure, and forbear.

(*a*) It lies at the basis of moral and mental training; hence its place should be defined and its value determined in relation to the ends and needs of:

(1) Somatic or general bodily training, *e. g.*, in the matter of carriage, walking, running, dancing.

(2) Language training, *e. g.*, singing, gesture, speaking, for general and special ends.

(3) Manual training, *e. g.*, writing, drawing, and the use of tools for educational purposes.

(4) Industrial training. For the professional training of skilled workmen.

(5) Military training, *e. g.*, of boys playing at soldiers, of militia, soldiers and sailors."

Well directed muscular exercise promotes the normal growth and development of the nervous and muscular systems. In other words, the most important ends of physical training, *i. e.*, of neuro-muscular exercise, are two: hygienic or health-producing and educative or habit-producing.

The competent director of physical training must achieve results in both fields, selecting, modifying, and combining his measures according to the special needs of his pupils.

The stage of evolution or immaturity is of the greatest importance, because the formal education of many pupils must cease before maturity is reached. This stage may be roughly divided into three equal periods, allowing eight years to each period. Both growth and development proceed, but growth preponderates in the first and second, and development in the third period.

First period, from birth to the close of the eighth year.— The whole body grows rapidly in the first two years of life, more particularly in the first year, but the brain especially attains its full growth at the eighth year. The child is imitative, inquisitive, and acquisitive. Sensory education may be diversified and somewhat specially emphasized, but motor training should be of a more general and elementary character. Both games and gymnastics, if intelligently selected and conducted, produce valuable results. The former should be easy and simple and the latter elementary in their character.

Second period, from the beginning of the ninth to the end of the sixteenth year.—This is distinctly the period of most rapid growth in height and weight. It appears to be one of comparative exhaustion and may be considered as the most critical of all these periods from the hygienic standpoint, if the organism is peculiarly susceptible to disturbing influences. In increase of weight the muscles take the lead. Motor co-ordinations reach a higher degree of development but are not fully matured till adolescence is nearly completed. Gymnastic training and athletic pastimes should be carefully selected to promote health and to develop the motor powers of the brain, and also should be more varied, complicated, and difficult than during the preceding period, as a preparation for later training, but the time for engaging in feats or contests that demand extraordinary skill, strength, or endurance is not yet.

The child will recognize authority and obey with a submissive spirit, but the youth demands reasons and convincing and persuasive arguments. While he may be led, he resists being driven. It is very important carefully to supervise this period when the foundations that have previously been laid for future years of sound health, strength, and endurance are settling definitely. Healthy bodies and the consequent healthy minds mean as much socially, politically, commercially, and religiously, as they do intellectually.

The third period, from the beginning of the seventeenth to the close of the twenty-fourth year is the period of established adolescence and is distinctly a period of character as well as of physical and mental faculties. The motor powers of the brain, nervous and muscular systems, have reached such a degree of growth and development as to need more difficult and active exercises as a prepa-

ration for the strenuous life in the pursuit of business, recreation, or whatever duties the future may involve.

The muscles do not attain their full growth till toward the end of the second period. When both brain and muscles are fully grown, neuro-muscular development enters upon its most active and important stage, *i. e.*, in the third period. An intelligent combination of hygienic and educative measures is called for, both in the sensory and motor education of the individual, during each and all of the three periods. During the whole of the first, and the first half of the second period, hygienic forms of exercise should preponderate, and during the last half of the second and the whole of the third period, educative forms of exercise take the part, providing that practically normal growth and sound health have been secured to start with. The predilection of youth for athletic contests, for trophy winning and record breaking, may be justified as natural and fitting by the principles of physical education. The average youth, if healthy, is more apt at expressing himself in terms of muscularity than in terms of mentality. Intellectual maturity comes later, unless arrested development supervenes.

The peculiarities of speech, manner, carriage, and conduct are conditioned by habit and also have a physical basis in the nervous system. The nervous and muscular systems of men and women become organized and habituated to actions or work by means of actions practiced in boyhood and youth. It is of the greatest importance to train and establish habits before the period of adolescence is reached. Aristotle says "Virtue is a habit." A teacher who is careless or indifferent in any way is doing a great wrong to the rising generation placed under his care when he allows them to form habits that are liable to become stumbling blocks in their future progress. Often

children return from recess in such a nervous and excited state caused by overplay that they cannot compose themselves and concentrate their minds upon the schoolroom work for the rest of the morning.

The deaf child especially needs a greater amount of rational physical training than the hearing child, to alleviate and finally correct all weaknesses and physical defects which may have been the result of the illness that deprived him of his hearing.

Ordinary play, games, and athletic exercises are not in themselves sufficient physical training, as is evidenced by the inferior and imperfect physical development and vitality of a large percentage of school pupils. Not enough attention is given to the posture and carriage of the body during such exercises, or the development of the most important and vital organs. The public schools in New York City, Boston, Philadelphia, Washington, Chicago, St. Louis, and other large cities have for years included corrective and hygienic gymnastics in their course of physical training. In the former character they aim (1) to counteract the effects of improper posture and to inculcate correct postural habits, by giving and developing control of the muscles of the spine, thorax, and scapulæ; (2) to equalize growth and development, and (3) to offset and supplement the unequal and partial activities of daily life—in play and athletic sports as well as in the schoolroom and shop; in the latter character, their purpose is to improve the organic processes of circulation, digestion, and respiration. They are of the greatest importance to growing pupils.

A daily practice of from fifteen to twenty-five minutes of these gymnastics is required to produce the best results. The experience of years of research and practice by the best authorities on physical education proves that these

gymnastics, as set forth above, are the best for their purpose; much better than ordinary play, games, and athletic exercises, and much better than the plan of the modern public "playground" movement—however valuable that may be in its proper place, which is in crowded cities.

The permanent value of physical training principally depends on adaptation, *hygienic* work, and light recreation for the average pupil, *corrective* gymnastics for the weak or diseased, and athletics for the vigorous. The teaching of hygiene is a branch of the life-saving service. There are systems upon systems, but the best is what is known as the American eclectic. The German system of gymnastics is excellent for the educational features of its heavy gymnastics, and the Swedish system is valuable for its educational and corrective work. Military drill is mainly for the correction of postural defects and mental training in precision and in habits of obedience. The manual at arms has no corrective benefits, but tends to aggravate asymmetry. Mr. Herman, the master of the sword and instructor in gymnastics at West Point says: "The use of the musket as a means of physical development for any one, be he man or boy, is worse than useless." Five years' experience of the writer, as a schoolboy, sustains such a view.

Athletic sports are valuable as a means of recreation. They conduce to physical growth and development and their moral effects are of value. They promote a public spirit and co-operative effort, and call for promptness, obedience, and self-control.

Every institution has need of a well-equipped gymnasium. The director of that gymnasium should be a man whose preparation has taken years of intellectual and technical work. He should have a sufficient understanding of anatomy, physiology, psychology, and anthropometry. His position is an important one, for he largely

influences the health, happiness, and character of the many who go to him for daily exercises. The modern physical director enjoys a position of dignity ranking him on an equality with the instructors and heads of other departments. He has a far-reaching influence in all that is good in our social system.

The institution director of physical training should go into the schoolrooms during school hours, correct sitting postures at desks, criticise improper ventilation and lighting conditions, and give lectures or talks on hygiene to the classes. His opinions should be consulted concerning the plans of gymnasium construction, and the best arrangements of athletic grounds.

From time to time, the pupils of every institution should have a careful examination by a skilled medical practitioner. Records should be kept of these examinations, and by means of the data the pupils should be assigned to different classes and squads best adapted to their various conditions. The physical director should find enough to do in his particular line of work without being called upon to do the additional duties of a supervisor, as several institutions seem to expect of men employed in such a capacity. No cheap, mediocre applicants should be considered for so responsible a position.

Remember that the main end of rational physical training is for *educational*—moral, physical, and mental—and not wholly athletic development. Regular gymnastic work, well directed play and games, organized athletic sports, and dancing all form an important part in the educational curriculum of schools for the deaf.

The physical director should be—not a hygienist, physiologist, coach, or specialist in any line, but a "physical educator" in the broadest sense.

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THE THOUGHT AND LANGUAGE OF THE DEAF-MUTE. AN INQUIRY CONCERNING THE TRUE FOUNDATION OF DEAF-MUTE INSTRUCTION.*—V.

Chapter III—Continued.

Is the sign language a logical language? Does it possess a logical character, or not?

"Logical" can mean nothing else than in accordance with thought. But as there is no other than regular thought, every language, since it stands in relation with thought, is logical, for language can express only what is thought. We therefore consider the question as fallacious; it answers itself.

But this question leads us to another. We wish to try to determine scientifically in what relation language stands to thought. When we speak of the movement of our thought we speak figuratively; "conceptions as such do not possess dimension." In speech we deal with physical, therefore with measurable, movements circumscribed in space. But we do not know *how* the psychical acts upon the physical; we can therefore not recognize a "direct psycho-physical causality" between thought and speech. Between the psychical and the physical there are only rules; there are no laws in the sense of a physical conformity to law. We are compelled to co-ordinate our ideas of psychical processes with those of physical processes; the one class points to the other. Speech points to thought and, *vice versa*, thought leads to speech. We accept this relationship in scientific form only, *cum grano salis*, and we

*Continued from the September number of the *Annals*, page 338.

express it thus: Speech is a "function" of thought; language—the sign language as well as verbal language—is a function of the comprehension. The idea of function has been drawn from mathematics; one understands by it the mathematical relation of dependence between two variable quantities. Robert Fricke explains the idea of function as follows: "If two variables, x and y, are connected in such a manner that to the single value x there always belongs a value y or a certain number of values y, according to a certain rule, then y is called a 'function' of x. One regards x as the 'independent' variable and the function y as 'dependent upon x.' "*

When we transfer the idea of the function to the relation between thought and speech, we must regard the thing comprehended as the "independent variable" and language as the "dependent." If we consider the thing comprehended as a stationary invariable content of thought at the period of the entrance of the function, we may regard language in its different forms—natural and artificial sign language, speech and writing—as function values.

This view of the relation between thought and speech helps us over a number of difficulties. Whether the sign language or verbal language comes into functional relation with thought or not alters nothing with respect to thought itself; whether movements of speech or sensations of sound, movements of writing or facial expressions form the "dependent variable," has no fundamental influence upon thought.

Perhaps some of the methodizers, in their contention that the sign language is illogical and not to be compared with verbal language, had in view merely the formation of the sentence. It ought to be clear that the charge, so far

*Quoted from C. v. Brockdorff's "*Anfangsgründe*," page 172.

as it regards the formation of *ideas* by the signing deaf-mute, is wholly unwarranted. The mind's "power of forming ideas" proceeds in the deaf-mute just as logically, that is, just as regularly, as in hearing persons. If the deaf-mute at all the stages of his life is considerably poorer in ideas than his hearing brother of the same age, it is not the fault of the sign language but of his deafness; the sign language is really the means by which he progresses mentally. The forming of an idea requires life—rich, manifold life; it requires active participation in the mental life of others; and this is very difficult for the deaf-mute or is altogether denied him. The developing mind requires the guidance and aid of others; on account of his infirmity the deaf-mute remains neglected. Is it therefore surprising if in his path of mental development he proceeds slowly and hesitatingly, and sometimes when his strength fails him even sinks into melancholy? While the hearing person rapidly climbs the heights and sees the events of life in the brightness of the sun, the deaf-mute wanders in the dark valley and only now and then gets a glimpse of the clear sky.

Now is the sign language illogical as regards the formation of judgments?

The question can not be answered without observing the process of judgment psychologically. The judgment is an act of thought and as such it must be viewed as a form of thought movement. The simplest grammatical form of a judgment is the simple declarative sentence or assertion.

We divide the assertion, from the point of view of verbal language, into three parts: subject, predicate, and copula. "The tree is high" is an assertion. The deaf-mute in the sign language thinks: "Tree—high." The grammarian accuses him of thinking illogically, since in the simple

assertion he does not express the copula and in other assertions disregards the inflections of the verb.*

What does the little word "is" signify in the sentence "The tree is high?"

The meaning given it by grammarians does not at all suffice for a full comprehension of its logical function. One must rather, like A. Riehl, "distinguish the logical form of an assertion from the grammatical construction of the sentence" and from this must also distinguish the psychological process of judging. When we perceive with the eye a really high tree, the judgment is already logically given. If perception is comprehension, *i. e.*, thought, then it is also judgment. We may add that our own formation of ideas takes place only through acts of judgment, but these judgments need not be verbally correct in a grammatical sense. If this were required, an independent beginning in the forming of ideas would be possible neither with the deaf-mute nor with the hearing child. In the forming of ideas, the natural activities of the mind, such as comparing, distinguishing, combining, etc., come into action; but comparing is judging, and so also is distinguishing. The result of our whole investigation passes through our mind; if the result of the elementary act of judging is logical, then the judgment also must be logical,

*We will refer briefly to the omission of the article. The article has a demonstrative meaning when we mean by "the tree" this tree here. Its demonstrative meaning is weakened as the consciousness of concrete reality recedes and the idea to be expressed becomes general, as in the sentence: "The tree blooms in spring." In the act of conception the deaf-mute also thinks "This tree;" his pointing with the finger, or even his looking intently at the real tree, demonstrates this. But there are other cases, in which he thinks in a more general way; he then in imagination passes his eye over a large number of representatives. The omission of the article in the assertion of the deaf-mute is therefore not a proof of illogical thought; the article is always thought with the idea and—even if hardly noticeable—is expressed in the sign language.

even if not grammatically correct in form; from the illogical nothing logical can be logically inferred.

The perception of the high tree produces two ideas in our mind, "tree" and "high," and they are there the instant that our attention proceeds in this direction. In judging we only unfold, as it were, what is already contained in our mind; we develop the still undeveloped in order to secure clearness with full consciousness. The activity of judging therefore possesses a decided character of movement; judging is nothing else than a bringing into relation, *i. e.*, a "going to and fro of our attention" among the contents of our thought. And in what does this find expression? In our signs; in our looking to and fro; in our pointing to the right, to the left, downward, upward, etc. The direction of our thoughts is betrayed by our conduct in the act of judging.

When the deaf-mute judges: "Tree—high," he repeats the points of the perception that in his opinion are most essential; but if we observe more closely we shall see that this is not the extent of his knowledge. His lively expression, his animated gestures, indicate that he means: "Tree high; yes, that is so; that is really so; just look. I relate ideas to one another as the reality shows them to me." He likewise creates, as it were, out of this first judgment a second one, with which he desires to describe his recognition as real and therefore generally valid. This act of recognition stands behind the little word "is;" it means "really" and "The tree is high" means: "The tree is really high."* The judgment could also appear in the form: "Tree high is;" this would be equally correct

*In the sentence "2×2 is 4" the word "is" means "really;" "2×2 is (really) 4." C. v. Brockdorff writes: "'To be' must be completed either by the word 'truly' or the word 'really.' Any conception of 'to be' without one of the two complements is meaningless." (See "*Anfangsgründe*," page 27.)

logically and it would conform even more closely to the natural process of thought. The word "is" shows the relation of the thought to reality; it is a sign of our consciousness of reality, without which we neither perceive nor express. In this sense "is" acquires theoretical importance of meaning, and forms, as A. Riehl truly says, "the pith of the assertion."

We recognize from this explanation that the relation of thought expressed by the word "is" is contained in the expression of the assertion in the sign language, and that therefore the judgment of the deaf-mute is as logical as ours. If the deaf-mute, in using verbal language, omits the small but important "is," this is partly due to his lack of practice in verbal language, but is mainly due to his lack of comprehension of the act of judging. The pure oral method demands "No sign language!" Yet all comprehension is comprehension by means of signs. With that demand the oral method has cut into its own flesh, and this remains true, notwithstanding all denials. To the deaf-mute as to the hearing person the word "is" must become a law of language which he shall consciously and joyfully respect. How can that be done? He must be shown what "is" designates and how the sign language expresses the same relation. To continue with the example already cited, there must be a separation of the ideas "tree" and "high" from the still undeveloped judgment formed from the conception. Here is "tree," here "high;" on the left I sign "tree" by reproducing trunk and crown with my hands; on the right I express "high" by looking upward and raising the hands as high as possible. This sufficiently shows that "tree" and "high" are to be thought. I move the fingers together now until they cover each other, indicating by facial expression and by gesture what is meant: "Yes, just look, the tree is really high." That

we represent our mental activity in the picture, thus becomes perfectly clear. Relating is in fact a "drawing towards" of one idea to another; we seek to compare them and cover them. In this manner the word "is" may also be made "comprehensible" to the deaf-mute who is learning to speak it; he observes his own mental activity and thus "experiences" the verbal function of "is." This is far more significant for the development of the thought than hundreds of sentences repeating the same form, as, "The bear is brown," "The mouse is small," "The sheep is white," etc. To become familiar with the functions of the mind, to differentiate and characterize them, is the most important part of deaf-mute instruction.

The hearing child soon learns the meaning of the word "is." How often the expression: "Yes, that *is* so, believe it," is added to confirm a judgment. A drastic movement of the hand, which any one can understand and which every speaker uses when he desires to emphasize his assertion, the emphasis laid upon "is" when one wishes to enforce belief, soon reveal to the hearing child the meaning of this word and show him its importance in the assertion. At some time in the past it may have cost the language spirit of the common people some struggles before "is" became recognized in the verbal assertion. It was in the differentiation of relations that the human spirit rose to the height from which it learned to master the world. In the mind of the deaf-mute there are only rudiments for this differentiation of thoughts; he must first struggle hard to obtain clearness. In this endeavor verbal language comes to him, equipped with its best expedients. In it the relations are developed in sharply defined forms, as sharply as the human mind can differentiate them. But in just this is the significance of a highly developed culture language to be sought, that it

helps rapidly and safely to develop the still undeveloped thought and its relations.

With this recognition of the high significance of verbal language there arises the question: Is the development of thought just characterized possible without resorting to signs?

Where a movement of thought takes place, in the relation of ideas, there appear before our eyes pictures of our own action and these impress themselves in characteristic signs. A symbolizing gesture conforms to every "and" and "but," and by it we readily comprehend the direction of the thought. "The tree blossomed beautifully in the spring, [*but*] it bears no fruit." Who cannot comprehend the relation of thought from the facial expression of regret and disappointment alone? In this case one comprehends the speaker without his opening his mouth.

All of our so-called language forms—I here name only the connection of the parts of a sentence and the combination of sentences in dependent and independent clauses—are the expression of relations which we can express in facial expressions and gestures, and which really are only understood upon the basis of signs.* Let no one believe that our language teaching has ever been "pure" from signs; whoever believes that is deluded. Our teaching would have been simply without results if we had not in some way—either consciously or unconsciously—aided the mind of the deaf-mute by indicating in gestures the thought movements corresponding to the language forms. The sign language is not so easily to be abolished as the champions of the pure oral method have thought. The sign language has not disappeared from our schools for the deaf, though this has

*If I were writing a special treatise on language teaching in schools for the deaf, I should not neglect here to call attention to the movement character of all so-called forms of language and their gestural representation.

been desired for several decades; in most of the schools it plays the same part in the intercourse of the pupils among themselves that it did fifty years ago. By the attempted suppression of the sign language nothing is accomplished except a clouding of the recognition of the true nature of deaf-mute instruction. When it is demonstrated that comprehension is always associated with signs and that the thought movement in forming judgments and relationships is a gesture process, it is clear that the sign language cannot be abolished. No power on earth can banish gestures from these processes and no one has the right to forbid the sign language. If in the intellectual intercourse of hearing persons the sign processes have been reduced to a minimum and are only noticeable here and there, this has been produced through the powerful influence of verbal language and hearing. But does verbal language exert this influence upon the deaf also? We shall discuss this question at the conclusion of this chapter.

We now leave this question of the problem of deaf-mute instruction and inquire concerning the logic of the sign language in the more extended assertion. Let us briefly consider the following occurrence: A deaf-mute is bitten by a dog. The deaf-mute expresses the idea literally as follows: "Dog bad bite (me) trousers torn." On account of this method of expression many theorists have contended that the deaf-mute's thought lacks logical character. The deaf-mute in this case, however, follows with his thoughts the natural process of perception; but he also follows closely the laws of thought. To perceive this we have only, as stated above, to differentiate the logical formation of the assertion from the grammatical formation of the sentence in our German language. The natural process of perception is the basis of the original order of words in all languages. What causes have contributed in the different languages of

to-day to modify the order of their words in one way or another, is not now easy to determine; continuous processes of condensation have been at work and have impressed their special stamp on the several languages.* In the natural process of thought the adjective follows its noun, as, for instance, in the ancient languages, Greek and Latin. The whole, from which the result proceeds, is thought and designated first. In this no one can find anything illogical. In German the sequence of words has changed; we say "A bad dog." The sign language therefore is not to blame if the deaf-mute violates the order of words in German; the reason lies in the nature of thought. To become familiar with the construction of the German language, the deaf-mute must first consciously translate. It cannot be otherwise. It is thought by some that the process of circumstantial translation can be avoided by suppressing the sign language. By that, however, one gains nothing whatever. We should rather plainly show the deaf-mute how the process of thought takes place in the

*"The ancient languages," says Professor P. Barth, "especially the Latin, which has fewer abstractions than the Greek, are more objective in their manner of expression than the modern. For the longer a language lives, the more it deviates from the objective form and absorbs into itself the result of mental labor, the abstract forms and abstract meanings of originally concrete words. The 'condensation' of the language, which concentrates a constantly growing number of ideas into its words, is a recognized fact.

"This has the disadvantage that words become more and more ambiguous, and the child or the uneducated person attaches a vague or even a wrong conception to the word. Modern languages have no satisfactory remedy for this disadvantage.

"The grammatical construction of the ancient languages is so different from that of the modern, the inflections are so much more manifold, the relations of dependence are so much more definitely shown, that the logical relations of sentences and parts of sentences are clearer and impress themselves more on the attention." (See Professor P. Barth, "*Die Elemente der Erziehungs- und Unterrichtslehre*," Leipzig, 1906.)

sign language, and how verbal language differs therefrom and proceeds in another manner. In this way alone can we establish our teaching upon a firm foundation and the sign language bestowed by nature upon the deaf is not ignored. In hearing persons, who from youth have been under the influence of verbal language, the natural process of thought has become so dimmed that they do not at all notice that they make a transposition of their ideas before they express them verbally. This is the result of practice; and by multiform practice the deaf-mute also will gradually become accustomed to the character of verbal language.* This, however, is a question which concerns the special method of language teaching and we cannot enter into its consideration at the present time.

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[TO BE CONTINUED.]

INDIVIDUAL RATHER THAN PROMISCUOUS THINKING.

As some one has wisely said, "God never created two human beings exactly alike." This being so, individuality, which essentially means individual thinking, is our birthright.

How often is this birthright sold, or stolen! As an example, take the man who sells his vote and thereby his right to think for himself. He may not sell it outright for money; like thousands of "stand-patters" and shallow-minded "good fellows," whose thoughts are chained to the full bread-basket, his vote he gives in exchange for

*We refrain from considering the other parts of a more extended declarative sentence, as their gestural place in the sentence offers nothing new.

friendship or favors. Thus is dethroned within him that supreme and divinely appointed monarch, Mind. Such a man thinks promiscuously, with the crowd, instead of individually.

But lest my words seem somewhat up in the air, I'll strike nearer home. At the last November election, because our School is not yet free from the clutches of politicians, the State ticket meant a good deal to us teachers. The defeat or success of a ticket was the same thing to us, so it seemed, as the keeping or losing of our jobs. How then should we vote? In a bunch, according to the logic of the full bread-basket? I hold that such a motive is altogether unworthy of us as free thinkers. Yes, I know there are the pet maxims of Americans, "Look out for number one," and "Self-preservation is the first law of life." But let those who are so bent on preserving themselves take heed to preserve the *best part of themselves*—an independent mind, untrammeled in the slough of politics.

As to how one may be robbed of this birthright, individuality, let me illustrate with an example of chemical action. Into a globe filled with oxygen is thrust a bit of ignited charcoal. The coal glows brilliantly till it and the oxygen are nearly consumed, when combustion ceases. What has become of the charcoal which has disappeared? It has united with the oxygen and they have formed an entirely new body, carbonic acid. An agent had to act upon the charcoal to cause it thus to lose its identity.

So we see that between the time a child enters the public schools and the time he graduates, he loses a large degree of his individuality; we conclude that some agent or agents must have deprived him of it. One of these agents is the school teacher. The evidence is against him, or should I say her?

Who can say such bright, original things as the child?

He thinks unhampered and unafraid. Last fall I met in one of our buildings a youngster wearing a political button. On questioning him he informed me that his father was a republican, but *he* was a democrat. I patted him on the back and said, "That's a good boy; keep on, and you'll be a man."

But take the average grade-school graduate and what is he? A piece of goods turned out of a factory, bearing the same trade-mark as every other piece turned out of the same factory. These pieces look alike, they talk alike, and the supposition is that they have been trained to *think* alike, promiscuously instead of individually.

Why do we so often put the answers into the mouths of pupils with our questions? True, we need to be clear and simple in our quizzing to draw out the pupil's knowledge. But why use questions all through the school course that require memorizing merely, rather than hard, individual thinking? Turn the questions upside down, so long as their perspicuity is preserved, and work them for all there is in them. For that big interrogation point, the world, will not put questions to our pupils in familiar text-book fashion. A boy once looked at me as though I had done him serious wrong, because in asking him a question I had made a slight departure from the wording of the text-book. I assure you I lost no time in turning him out of the well-worn path of this false notion, a path by which too many children wend their way through school.

And right here I wish to enter an objection to the ready-made, misfit questions that are in general use in schools. Of course they come cheaper when we get them in wholesale lots or take them out of text-books, but do such questions, cold and lifeless, like pieces mechanically ground off the phonograph, promote individuality in those to whom they are put? Imagine Socrates or Plato asking questions from a text-book!

Arithmetic, that strenuous study, offers exceptional opportunity to develop individual thinking. It ought to be a mental wrestling. Then I say, "hands off" the young wrestler in his match against a hard problem after he has had sufficient previous training. Let him struggle, let him perspire, let him groan; let him think for himself that he may grow.

I believe in latitude and longitude in language work as well as in geography. Why should a teacher force upon his class his pet words or expressions for which they may have no more taste than for his favorite breakfast food? The other day one of my boys called the new year a queen. This designation was extremely distasteful to me, yet I did not nip off his tender shoot of an idea; it was part of his individuality. We do not quarrel with the Germans because, unlike us, they make the sun feminine.

Individual thinking on the part of our pupils is often hindered by our methods. In fact, some of us are entirely too methodical. We allow our methods to become a thick undergrowth that crowds out the tender plants. We make of them iron bands which keep the youthful mind from its natural expansion, whereas they should be elastic like that which a gardener puts around a young tree. There are teachers who, so much the worse for their pupils, think that theirs is the only way to intellectual salvation. I wish that a heap of our methods were dumped into the muddy Missouri. It would be like the weeding out of a corn-field.

Often when some new invention comes out, people say, "How simple! Why did not somebody think of that before?" I'll tell you one reason why: because the people have been trained to think in droves, and the mass of them have no mind of their own. You can find hundreds of men who are able to build a new machine if you'll

furnish them the pattern; hundreds of ready writers who can make up a good story if you'll give them a fresh plot, and hundreds of aspiring young artists who can make excellent *copies* of Charles Dana Gibson's drawings. But what is wanted is men with *original ideas*, and it is up to the teacher to supply such men.

Considering how much it means to the integrity and welfare of the State, how great is the importance of fostering in our pupils that priceless gem, individual thinking!

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ARTICULATION DRILL.

When young oral pupils have been taught all the elements of speech and their common combinations, there yet remains a great amount of important work to be done before these elements are fully mastered. Not only must teacher and pupil strive constantly for improvement in the individual production of elements, but the pupil must become so familiar with each element that he can recognize it instantly in any form or place, and produce it immediately, easily and distinctly, at will.

This necessitates constant and thorough drill.

Drill work is the least interesting, yet perhaps the most important, feature of teaching. There is pleasure in new work, in its preparation and its presentation, and, unless it be poorly prepared and indifferently presented, the pupils enjoy it more than review work.

Nevertheless, experience shows us that in most cases a carefully prepared, skillfully presented, and enthusiastically received lesson is of little avail, unless it be followed by the effective drill that deepens the first impressions until they are thoroughly fixed in the minds of the pupils.

Articulation drill is especially prone to become monotonous and uninteresting. It is not "show work" in any sense, as we seldom entertain visitors with its exhibition. There is nothing attractive to the uninitiated in the struggles of a deaf child to produce a correct sound. But the teacher, realizing its importance, gives a goodly portion of time to it, and strives to relieve its monotony by presenting it in as many different ways as possible. By the exercise of all one's ingenuity, and by enthusiastic presentation of each variation, it may become a very interesting feature of the day's work.

In the course of study in the Wisconsin School one hour each day is allotted to articulation in all oral classes in the second and third grades. Teachers usually divide this hour into periods, as, for example, vocal and breathing exercises, ten minutes; hard words, phrases, or general questions, twenty minutes; elements, thirty minutes.

Our present attention is to be given to the latter period, and a few simple devices given simply to introduce variety. Every teacher can add to these suggestions variations of her own adapted to the needs of her own class.

(*a*) Draw upon the blackboard, roughly, as many squares as there are consonants. Call each pupil separately, pronounce a consonant, and have the pupil repeat it. If poorly given, let him repeat it until he produces it as well as he possibly can, using touch whenever desired. (In my own case, this is very frequently.) Then send the pupil to write this consonant in one of the squares of the blackboard. He may write either *k*, *c*, or *g* for the *k* sound, or you may require him to write all three forms. It makes more variety to do one way at one time, and the other way the next time. Proceed in this way, skipping about the class, until all the consonants have been given, and, of course, all the squares on the blackboard filled.

(*b*) If this exercise does not fill the whole period of time, pass erasers to the class. Have each one in turn point to a character on the blackboard with the eraser, pronouncing it carefully. If well given, the teacher nods, and the pupil erases it. If poorly given, help the child to produce it correctly. Proceed in this way until the blackboard is cleared.

Both (*a*) and (*b*) may be used any number of times, using consonants, vowels, and combinations of various kinds.

(*c*) Prepare a number of small cards, perhaps two by three inches, with an element, or one combination of elements, plainly written or printed on each card. These are conveniently kept in small boxes, one containing consonants, one vowels, one combinations used at beginnings of words, and one combinations used at endings of words.

The cards may be used in a variety of ways. One way is to distribute the contents of one box among the pupils. Each pupil rises in turn, and gives a sound represented on one of his cards. The teacher, or one of the pupils appointed especially, points to the corresponding character on the chart or blackboard. If given correctly, the pupil gives up the card. If given poorly, so that the teacher herself cannot recognize it, the pupil must keep the card, and be called on again later. The game is, of course, to get rid of the cards as rapidly as possible.

(*d*) Another day the same cards may be passed, perhaps just one to each pupil, as this exercise takes more time. A pupil is called upon, rises, pronounces sound, and passing to the blackboard writes a word containing the sound. At first they will make many mistakes, especially with the vowel sounds, but they improve rapidly with practice.

Other ways of using the cards will suggest themselves to the teacher.

(*e*) Draw several vertical lines on the blackboard, to separate columns of words. Write a character as a heading for each space, as—

b	*c* (=*k*)	*c* (=*s*)	*ch*	*d*	*f*	*ph*	*g*

Beginning with the first column, let pupils give as many words as they can, containing *b*. Write them in the *b* column as rapidly as they are given. Should they give a word containing *b* which is not sounded, as *thumb* or *lamb*, call their attention to the fact that *b* is silent in that word, and do not enter it on your list.

As soon as the first column is filled, proceed to the next. This exercise is especially helpful with the difficult and obscure sounds.

(*f*) The above exercise makes good seat work, pupils ruling their own slates or papers, but copying the headings from the blackboard. The easiest sounds are best for seat work, as mistakes cannot be corrected as soon as made.

(*g*) Write a list of well-known words on the blackboard. Have pupils pronounce carefully, and then supply the diacritical markings themselves.

(*h*) An occasional good exercise is to write a list of long, unfamiliar words, marking all the sounds yourself, and dividing into syllables. Let the pupils pronounce these without help. Should they fail after several efforts, drill on the faulty element or syllable, then let them try the whole word again. Make this purely a drill in articulation, and neither ask nor give the meaning of the words at this time. Should any pupil recognize a word and want to tell its meaning, it is well to accept it without comment, and return at once to its pronunciation.

(*i*) We teach seven sounds of the vowel *a*. Write seven

a's on the blackboard, call upon a pupil to supply their markings, then have each pupil pronounce the list. Then write four *e*'s, and proceed as before, until all the vowel sounds have been given in this way.

To the teacher of advanced pupils these exercises seem puerile in the extreme, but the success of primary teaching hangs upon just such trifles.

The primary teacher must cultivate and exercise all her ingenuity and originality to the adaptation and use of trifles, for "Trifles make perfection, and perfection is no trifle."

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THE SIGN LANGUAGE. A MANUAL OF SIGNS.*—VII.

Articles of Food, Fruit, Etc.

Bread.—Hold in front the left bent hand, thumb pointing outward; across the back of the fingers, draw back and forth the edge of the little finger of the right "B" hand.

Butter.—Holding the open left hand with the end pointing upward, brush the end of the "H" hand downward against the palm of the left.

Meat.—Grasp the fleshy part of the left hand between the thumb and forefinger, by the thumb and forefinger of the right hand.

Gravy.—Grasp the fleshy part of the palm near the little finger of the left hand with the forefinger and thumb of the right hand and draw them away from the hand, letting them close when they drop away. Or,

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(2) Make a "spoon" with the right "C" hand and give it a slight twist as if dipping and emptying the spoon.

Potatoes.—Making a "fork" of the right fore and middle finger of the right hand, stick it against the left "S" hand. Some hold the left hand in position of "&."

Salt.—Place the end of the right "H" hand against the lips; bring it away and down with a twist turning the palm side down and strike the end against the back end of the left "H" hand.

Pepper.—Draw the forefinger of the right "G" hand from left to right across the right eyebrow; bring the hand out to the right and let it assume the position of the open "O" hand, then throw it toward the imaginary plate as you would a salt shaker.

Milk.—With the "S" hands make motion of milking.

Cream.—Making a "spoon" of the right "C" hand, make motion of "skimming" across the back or palm of the left open hand.

Cheese.—Place the fleshy parts of the hands, palm to palm, the right hand pointing to the left and the left to the right, so the fingers extend beyond the palms; with a twisting motion rub the palms against each other.

Coffee.—Placing the "S" hands one on top of another, make a grinding motion as if turning a coffee mill.

Tea.—Trace the rim of the left "O" hand with the ends of the thumb and forefinger where they join in the extended "O" hand.

Corn.—Make motion of shelling the left forefinger with the right hand. "Roasting ears" may be indicated by making the motion of eating corn off the right forefinger as a "cob."

Tomatoes.—Make sign for "red" (*i. e.*, draw the forefinger of the right "G" hand downward against the lower lip); place the end of the right thumb in center of the left palm

and with this as a pivot make a circle on the palm with the end of the forefinger. Or,

Draw the end of the right thumb around the outside of the left "S" hand as in slicing.

Beans.—Pass the right closed "O" hand along the length of the forefinger of the left "G" hand, with a pecking motion.

NOTE: This sign is used indiscriminately for *rice, oatmeal,* and all kinds of *grain.*

Peas.—Make sign as above; then, grasping the left forefinger near the knuckle with the thumb and forefinger of the right hand, pass the thumb down its length as in motion of pulling the peas.

Onion.—Rub the right fist at the corner of the right eye.

Radish.—Make sign for "red" (see "tomatoes" above) and then draw the left forefinger between the thumb and forefinger of the right hand to indicate its shape.

Flour.—Make sign for "grain" (see above), then rub palms of the hands together.

Fish.—Extend the right open hand, pointing out, thumb edge up; place the end of the left open hand against the wrist of the right, and work the right hand like the tail of a fish.

Cake.—Place the right "5" hand against the palm of the open left, so the ends of the fingers form almost a circle; lift the hand away a little, at the same time drawing the ends of the fingers closer together but not touching. Precede or follow this with the sign for sweet, *i. e.*, draw the end of the right "H" hand downward across the mouth.

Biscuit.—Same as for cake (above) except make the sign for "warm" or "hot" instead of for "sweet," as follows: Hold the right hand over mouth and draw away quickly as if the hand were warm or hot.

Pie.—Place the bent right hand down against the left

palm so the fingers point toward the left; lift the right hand, turn it so the fingers point straight out and let the hand drop on the palm again and the two lines thus made will indicate the size and shape of a slice of pie.

Doughnut.—Bite "R" between the teeth.

Toast.—With the right "V" hand used as a fork "stab" first against the back of the left open hand, then against the palm of same.

Pickle.—Make sign for "sour" (carry the forefinger of the right "G" hand to the mouth and make a slight puckering thereof); then down the length of the forefinger of the left "G" hand draw the end of the right forefinger as if to split it.

Cracker.—Throw the right "S" hand against the left elbow, holding the left "S" hand up near the right shoulder.

Oysters.—Hold the hands palm to palm; draw the right hand away and up; then with a motion like cutting with a hatchet throw the right hand downward against and beyond the left so that the palms rub as the hands pass.

Soup.—Making a bowl with the left hand and a spoon with the right, make a motion of dipping the soup from the left hand to the mouth with the right.

Sugar.—Draw the end of the open right hand downward across the mouth.

Nut.—Bite the end of the right thumb of "A" hand, nail down, and strike the top of the left "S" hand with the right "S."

Peanut.—Sign for "nut;" then with the thumb and forefinger of the right hand grasp the end of the forefinger of the left "G" hand and give a twisting motion as in breaking the end of a peanut.

Apple.—Place the right "S" hand at the corner of the mouth, so that the middle joint of the forefinger touches it, and give the hand a twisting motion several times.

Peach.—Bring the hands, one from either side, to the mouth, making "&" with both of them; or,

(2) With the "&" hands together in front make motion of tearing a peach apart.

Pear.—Grasp the left "&" hand in the fingers of the right and lightly draw the right hand off the left so it assumes the position of "&" when clear of the left; then make a "stem" on the left hand by placing the forefinger of the right "G" hand against the end of the left "&" hand, which is not moved during the sign.

Grape.—Against the back of the left "&" hand strike the ends of the fingers of the right bent "G" hand; repeat the motion several times, each time a little farther down on the left hand till the fingers of the right have passed the knuckles of the left.

Fruit.—Sign as in "grow" (push the right "&" hand upward through the left "O" hand); when through, quickly make left "&" hand and grasp it over the back with the fingers of the right and draw them down and off the entire length of the left hand.

Strawberry.—Make sign for "red" (draw forefinger across lip); grasp the thumb of the left "A" hand from the back with the right hand so that the fingers of the right clasp over those of the left and the end of the right thumb nail rests against the back of the knuckle of the left thumb, thus indicating the size of the berry.

Currant.—Sign "red" same as above; then grasp the little finger of the left "I" hand as above, only rest thumb against palm side of little finger.

Banana.—Make motion of peeling the forefinger of the left "G" hand as if it were a banana, then sign "yellow," (give the right "Y" hand a twisting shake several times).

Orange.—Holding the left "S" hand in front, place the end of the thumb of the right "Y" hand against the back

of the left hand, and draw it across, downward, the width of the hand. Some add "yellow" as above. Others add "sweet" (see preceding pages).

Lemon.—Same as above, then add "sour" (see preceding pages). Or,

(2) Hold the "S" hand against the mouth as if it held a lemon and contract it as if squeezing a lemon.

Watermelon.—"Thump" the back of the left "S" hand. Some add "green" (give a twisting shake to the right "G" hand).

Muskmelon.—"Thump" as above; then along the back of the left open hand draw the thumb and forefinger, an inch apart, to indicate the ridges along the side of the muskmelon.

Pumpkin.—"Thump" as above and add "yellow" (see above).

Cabbage.—Strike the sides of the head with the wrists of the "A" hands, one on either side.

Turnip.—Rub the nail side of the thumb of the right "A" hand in the center of the palm of the open left hand.

Molasses.—Draw the forefinger of the right "G" hand across the width of the mouth from left to right (knuckle to end).

Gum.—Crook the forefinger of the right "G" hand and place the crook of the joint at the corner of the mouth and pull it down and repeat the motion several times, the mouth making a chewing motion also.

Beer.—(Including intoxicating drink.) Throw the right "Y" hand against the mouth, end of thumb striking the mouth.

Wine.—Rub the right "W" hand against the cheek.

Vinegar.—Strike the mouth with the forefinger side of the right "V" hand.

Animals.

Animal.—Lock the ends of the fingers, or place them end to end (not necessarily touching) and place hands, palm to breast; move the hands outward and back following motion of chest in breathing.

Horse.—Place the "H" hands against the head, one on either side, pointing upward; work them backward and forward a few times, indicating the ears.

Mule, Donkey.—Same, but use the whole hand instead of the "H" hand, to indicate size of ears.

Cow.—Make "horns" on the sides of the head with the "Y" hands.

Dog.—Pat the knee and snap the fingers as in calling a dog.

Cat.—Place the closed "O" hands on the lip, one on either side of the mouth, and with thumbs and forefingers pull imaginary "whiskers."

Sheep.—Using the right "V" hand as shears, lay the fingers, backs down, on the upper side of the left forearm and work the "V" as shears, moving the fingers up the arm toward the elbow.

Hog, Pig.—Place the back of the open right hand under the chin with fingers pointing halfway between the left and the front and shake the end of the hand up and down.

Goat.—Place the back of the right "V" hand against the chin so the knuckles touch the end of the chin; quickly raise the right hand now and strike the backs of the fingers in the bent "V" against the forehead, then straighten out the fingers, bringing them upward and outward and throwing the hand away from the forehead.

Bird.—With the knuckle of the forefinger of the "G" hand against the mouth and the finger pointing outward, bring the ends of the forefinger and thumb together to represent the bill, then work the bent arms as wings.

Chicken, specifically *A Hen.*—Make bill as above; then with the fingers of the bent "V" hand make scratching motion in the palm of the open left hand. Or,

(2) Make bill as above and then with the forefinger of the right "G" hand slash across the right side of the neck.

Cock.—Make bill; then place the right "3" hand (thumb and two fingers) with the thumb against the forehead to represent the cock's comb.

Turkey.—Grasp the bridge of the nose between the thumb and forefinger of the right hand and pull away with a pinching motion; then hold the forefinger of the right "G" hand pendant from the breast.

Duck.—Make bill with two fingers instead of one, indicating wider bill.

Goose.—Make bill as in "duck;" then stretch out the forearm in a crooked motion to represent the neck of the goose.

Pigeon.—Make bill; then bring right "B" hand up, thumb side against the chin, and lower it in a half circle to the breast, indicating the protruding breast of the pigeon.

Quail.—Make bill; then "bore" the forefinger of the right "G" hand in the side of the neck, or bring the closed "G" hand up and draw it behind the ear.

Robin.—Make bill; then "red" (draw forefinger across lower lip) and then indicate breast.

Elephant.—Extend the whole arm from the front of the face, pushing the hand first up near the face and then outward and down to represent the trunk.

Camel.—Place the "C" hand, palm up, in front of the neck, then draw it out, tracing in the air the shape of the camel's neck.

Lion.—Place the bent "5" hand above the forehead, palm side down, and draw it above and over the head toward the back, shaking the hand at the same time.

Tiger.—Make sign for "cat" (see above) and then with the forefinger and thumb held an inch apart indicate the stripes by rubbing against the body.

Leopard.—Make sign for "cat" (see above) and then strike the side with the ends of the fingers of the bent "5" hand to indicate the leopard's spots.

Zebra.—Make sign for "horse" (see above); then with thumb and forefinger as in "tiger" represent stripes against the sides of the body.

Wolf.—Push the forefingers of the "G" hands (one on either side of the mouth) upward from the chin, indicating the wolf's fangs; then bring the bent "5" hand in front of the face, drawing it outward from the nose to indicate that shape of the wolf's nose.

Fox.—Grasp the end of the nose with the "F" hand and work the rest of the fingers.

Squirrel.—Bend the fingers of the "V" hands and place them up before the mouth, so the fingers of one hand point toward those of the other; throw the ends of the opposite fingers together several times.

Rabbit.—Cross the "H" hands so the right rests upon the left; the right points toward the left and the left toward the right; work the fingers forward and back, each in the same direction.

Deer.—Make "horns" of the "5" hands, one on either side of the head, and then extend the hands outward to indicate the size of the horns.

Bear.—Cross the arms so the right hand will be near the left elbow and the left hand near the right elbow, as in hugging; draw the arms apart so the fingers of the hands will scratch along the arms as they come apart.

Monkey.—Strike the hands against the front of the body, near the side, so the ends of the fingers scratch upward, turning them inward as the hands rise against the body;

repeat the scratching motion and at the same time put the end of the tongue between the lower front teeth and the lip, pushing it outward to indicate the shape of the monkey's chin.

Snake.—Holding the right "V" hand down at the side, fingers pointing forward, extend the hand along in a zig-zag way to indicate the motion of the snake crawling. Or, indicate the same motion with the right "3" hand, with the thumb pointing up. Or,

(2) With the right elbow resting in palm of left hand, make a "coil" sign with the right "G" hand forward.

Frog.—Place the right "V" hand against the throat; then with the "V" hands held one beyond the other and both pointing toward the left, bend and unbend the two fingers of each hand, representing the motion of a frog's legs in swimming.

Butterfly.—Lock the thumbs with the hands crossed, backs down, (the hands being on opposite sides); or, place together the ends of the thumbs of open hands, palms down, and work the hands as the wings of a butterfly.

Worm.—Wriggle the forefinger of the right "G" hand on left palm to represent motion of worm in crawling.

Rat.—Rub the "R" hand upward across the side of the nose, or use both "R" hands in the same way.

Mouse.—Rub the end of the forefinger of the right "G" hand in the same way as above in "rat," or use both forefingers.

Bee.—Place the end of the forefinger of the right "G" hand against the right cheek; then remove and brush the open hand, edge against the cheek, outward.

Fly.—Make motion with the right hand on left arm as of reaching out and catching a fly off the table or in the air.

Spider.—Cross the hands, fingers pointing outward,

and clasp the little fingers; work the fingers like the legs of a spider, extending the hands forward the while.

Insect.—Place the thumbs of the open hands, end to end, palm down and fingers pointing outward, and, bending the ends of the fingers, work them like the legs of an insect.

NOTE: The diminutive of animals is indicated by preceding or following the sign by that for "baby" (folding the arms across and indicating action of holding a baby).

Specifically "*Bull*," and by inference the male of animals, is indicated by rubbing the "A" hand in a circle on the forehead, the fingers against the head.

Fish.—Extend the right "B" hand in front straight out from the waist, or a little above it; then place the end of the left open hand at right angles against the wrist of the right, and then wiggle the right hand from the wrist as if it were the tail of a fish.

THE WORLD AND NATURE.

The World.—Placing the right "W" hand, fingers pointing outward, first upon the left "S" hand, encircle it with the right, starting the hand outward.

The Earth, or *The Globe.*—Hold the left "S" hand as if it were grasping an axis held between the thumb and middle finger of the right hand; move both hands as if the left were turning or swinging on this imaginary axis. This sign is also used to mean "geography."

Land.—Rub the ends of the thumb over the ends of the fingers, using both hands. Sometimes the sign for "farm" or "country" is added (rub the open right hand on the under side of the left forearm.)

Sky, The Heavens.—Hold the "B" hands up in front, their ends pointing out and touching; draw them apart toward the side and down, so they describe the arc of the sky.

Sun.—Holding the forefinger of the right "G" hand pointing up toward the sky, describe a circle in the air with it; then bring hand to position of "&" turned and pointing down; then bring the hand downward, while the fingers are opened to "5", thus representing the beams of light from the sun; in this position raise the hand back with a vibrating motion.

Moon.—Hold the right "C" hand over the side of the right eye and looking up at the sky lift the hand, still in position of "C," upward toward an imaginary moon, and end as in "sun," above.

Star.—Hold the "G" hands up in front, pointing the forefingers upward toward the stars; bring the right hand back a little and then strike the left forefinger with the right, carrying it along the length of the finger; do the same with the other hand and repeat this motion several times.

Light.—Hold the "&" hands out in front and somewhat elevated, pointing out and touching at the ends; push the hands out and to the side, opening the hands to "5."

Bright and *Clear.*—Hold the "5" hands together, end to end in front; draw them apart, lifting them upward and out toward the side, while the fingers are worked up and down as in playing a piano.

Light (that which throws beams).—Place the right "&" hand upon the thumb of the left "A" hand, then extend the right hand outward, opening the fingers to "5," and then spreading the hand out and around.

Dark.—Draw the forefinger of the right "G" hand across the right eyebrow from left to right; then bringing the open hands, palm to self, up in front, pass the right before the face toward the left and the left similarly toward the right so they pass each other in front of the face. The first part of the sign, drawing finger over eyebrow, is usually omitted.

Clouds.—Draw the forefinger across the eyebrow as above; then hold the "5" hands out in front elevated and encircle one with the other while they are moved about in front of the face.

Water.—Strike the mouth several times with the right "W" hand (the forefinger against the mouth).

Rain.—Sign for "water;" then bring the "5" hands elevated toward the side, fingers pointing out and palms down; drop the hands, lifting and dropping them several times in succession, the fingers thus indicating the falling drops of rain.

Snow.—Make sign for "white," thus: place open hand against the breast and draw it away, closing the fingers against it, so that when it is free of the body it is in position of "&;" then end with hands same as above in "rain," omitting "water."

Ice, Freeze.—Hold the "5" hands out, palms down; drop the hands downward a few inches rather forcibly, at the same time quickly bending the finger ends and stopping them rigidly bent as the hands are brought to a stop.

Lightning.—Hold the forefinger of the right "G" hand high, pointing upward, and then bring it down quickly zigzag through the air.

Thunder.—Place the right forefinger to the ear, bring the "S" hands out to the front from the sides; jerk the right hand toward self and throw the left out toward the side, and then reverse the movement of the hands, repeating the motion several times.

Earthquake.—Sign "earth" (see above) and finish with hands as in "thunder."

Mountain.—Strike the back of the left "S" hand with the back of the right "S" hand; then extend the open hands, palms down, toward the left, tilt them and lift them upward, following the side of an imaginary mountain;

turn to cross the top and then bring the hands down on the other side of the "mountain," thus having traced its shape with the hands. Note that the left hand proceeds first and the right follows it.

Peak.—Make "mountain," and finish with raising the "G" hands up from the sides and closing at a point.

Hill.—The sign is similar but the hands are not lifted so high.

Valley.—Place the right open hand elevated on the right side and the left similarly on the left, the palms outward; draw both hands down to meet in front of the waist-line, the hands thus tracing the sides of two opposite hills or mountains.

River.—Make sign for "water" (see above); then bring the left "4" hand out to the front from the side, palm down, fingers pointing diagonally away from the body toward the left; from making the sign "water" bring the right "4" hand down to the front in similar position and pointing in the same direction as the left, somewhat behind it; then move both hands diagonally toward the left, and as the hands move forward shake the fingers up and down unevenly to represent the flowing of the water.

Spring.—Make sign for "water," then push the right "&" hand up through the left "O" hand and as it comes up change to "5" hand and work the fingers to represent flowing water.

Grass.—Push the right "&" hand up through the left "O" hand; then carry it out in position of "G" and pass it over an imaginary surface, giving it a shaking motion to indicate the green surface.

Flower.—Hold the "S" or the end of the "&" hand directly under the nose as if holding a bunch of flowers there to smell. Some make this sign first under one nostril and then the other. Some place the end of the

"&" hand under the nose and then open out the fingers to nearly "5" hand.

Blossom.—Sign for "flower;" then bring the "&" hands together, ends pointing upward, and open them out to "5" hands, thus indicating the opening of the flower.

Wind.—Holding the hands up in front with palm toward palm, wave them first to one side and then to the other, with more or less energy according to the intensity of the wind.

Field or *Garden.*—Place the ends of the "5" hands together so that the ends look like the ends of a rail fence; draw the hands apart toward the sides and bring each around toward the body, indicating a fenced piece of ground, and then sign for "grow" (push the "&" hand up through the left "O" hand and then spread the fingers out to "5").

Tree.—Let the right elbow rest in the left palm, the forearm extending straight up and the hand as in "5;" twist the hand with a shaking motion rapidly several times.

Bush.—Hold both open hands, palm toward palm, pointing upward, in front; rub one up against the other and reverse, a few times.

Vine.—With the "G" hand moving upward in a snake-like way represent the course of a climbing vine; then spread both open hands upward and outward.

Grapevine.—Make "Grape" sign; then "Vine."

Gold.—Pinch the lobe of the right ear with the thumb and forefinger, then bring the "Y" hand out to the front and give it a shaking motion several times.

Silver.—Make "white" (place palm of right hand against breast and draw it outward, hand assuming the position of "&"); then bring the hands together, making a hollow of them; shake as if they contained something to jingle.

Tin.—Strike under the chin with the back of the right

"S" hand; then grasp the end of the open left hand with the fingers of the right and give a motion as if shaking or bending tin—the left hand representing the tin.

Metal.—Strike the back of the fingers of the left "4" hand with the bottom of the right "S" hand, striking it across the fingers from the forefinger to the little finger.

Iron.—Strike the forefinger of the left "G" hand with the bottom of the right "S" hand.

The Deity and Religion.

God.—Elevating the right "G" hand, point it outward, then draw it backward and downward toward self; the end then points up toward heaven. Some use whole open hand.

Lord.—Place the right "L" hand up near the left shoulder and carry it diagonally down to the other side of the body near the waist; then finish with sign for "rule," *i. e.*, move the right open hand, extended at arm's length in front from the side, over the left, bringing the left hand up against the body.

Heaven.—Both "B" hands touch at the ends in front and somewhat elevated on a level with the head; draw them apart toward the sides; bring the left hand back, twisting it so as to leave the palm outward and pass right open hand under left, turning it upward, and raise it until it shows above the left hand.

Christ.—With the "5" hands in front, pointing outward, palm toward palm, bend the middle finger of the right hand toward the left, and strike the center of the left palm with it; withdraw it and repeat the motion with the left hand against the right. Note that the fingers thus striking the center of the palm indicate the nails driven in our Saviour's hands.

Christian.—Sign for "Christ;" then "friend," "follower," or "believer" (see preceding pages.)

Spirit, or *Ghost.*—Place the slightly bent left hand, palm toward self, on a level with the breast, and the right hand, same position, on a level with the waist-line; lift the right hand and lower the left (the right on the outside and left inside), at the same time let both hands assume "&" position; the right hand stops when it reaches the height of the face and left reaches the waist-line.

Holy Ghost.—Sign "Ghost" as above and follow with "Holy" (see preceeding pages). Or make "Holy" and "Ghost."

Church, Chapel.—Place the right "C" hand on the back of the left "S" hand, thumb next the back. Or,

(2) Place ends of the "B" hands together to indicate roof of house, then make sign for Sunday, *i. e.*, raise hands at front of shoulders pointing upward, with the palms outward (literally, "Sunday house)."

Prophet.—Place the ends of the fingers of the "V" hand on the face astride the nose and under the eyes (for "see"); then holding the left "B" hand in front, palm toward self, push the "V" through the left hand between the middle and third fingers which are parted to let the hand pass; finally end with open hands down against the body to indicate the person. Some pass the fingers under the left hand instead of between the fingers.

Worship.—Sign "kneel" (place the bent fingers of the right "V" hand in the palm of the left hand, the fingers thus representing the bent knees); then place hands in attitude of prayer or supplication and then sign "serve" (with the open hands in front, palms up, move them to one side and then to the other).

Priest.—Place the ends of the forefingers of the "G" hands, one at either side near the shoulder; draw them

down held against the body until they reach just above the waist-line, then draw them toward the centre till they meet. Or,

(2) Placing the "4" hand against the breast, palm to self and fingers pointing up, draw down nearly to waist; place hand again at breast, but fingers pointing toward the left, then draw across breast to the right.

Devil.—Place the ends of the thumbs of the "3" hands at side of the head, the forefingers and middle fingers pointing outward; bend and unbend the fingers, indicating the supposed horns of his satanic majesty.

Hell.—Sign "devil," then with the right "G" hand pointing down let the hand descend as far as it can.

Swear, Curse.—Bring the palm of the "5" hand up to the mouth, closing it to "S;" draw it away and bring it down with some force.

Idol.—Draw the "C" or, better, the bent forefinger of the right "G" hand down across the face for picture; with the "I" hands outline in the air a supposed image, and put hands in attitude of prayer.

Bible.—Sign for "Christ" (see preceding pages); then "book," placing the hands palm to palm for the backs of a book and opening them.

Moses.—Place the thumb and forefinger against the sides of the head (one on either side near the temple); change to the position of the closed "O" hand as you draw them away from the head.

Abraham.—Holding the left arm against the breast, the hand near the right shoulder, strike the outside of the forearm near the elbow with the right "A" hand.

Saviour.—Cross the "A" hands at the wrists as if the hands were bound, and then bring the hands apart to indicate "freedom" and add the sign for "-er" to indicate the person.

Catholic.—Make the sign of the cross upon the forehead with the right "N" hand.

Quaker.—Clasp the hands together, then rotate the thumbs, one around the other.

Baptize.—Make sign for "water," then make motion of sprinkling water on the forehead; or (2) bring the "A" hands toward the right and make motion of immersing imaginary person. For *Baptist* make the second sign for "baptize" and "-er" to indicate the person.

Methodist.—Bend the fingers of the right "V" hand and place them in the left palm like "kneel."

Presbyterian.—Place the ends of the fingers of the right "V" hand in the palm of the left, or strike the palm with the right "P" hand.

Episcopal.—Bending the left arm against the body so the hand comes up near the right shoulder, place the forefinger of the right "G" hand against the outside of the wrist, then swing it down and around and strike it against the elbow, thus indicating the sleeves of the surplice.

NOTE: In each case when the person is meant, add the "-er" sign as given under "Occupations of Mankind."

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[TO BE CONTINUED.]

IN SWITZERLAND.

A GEOGRAPHY LESSON FOR DEAF CHILDREN.

DID you ever take a very long ride on a train? It is fine fun, isn't it? But I don't believe any of you boys and girls ever took a ride in a steam car right up the side of a mountain. You all know what hills are, don't you? How very high they are! Oh! but a mountain is so much

higher. Why, some mountains are so high that they reach away up to the clouds; think of that! When you are in one of these mountain trains, it seems as if it must fall backward and roll down to the little station again, but it never does. Neither the engine nor the track are like those you have ever seen, but they are made for such travelling. The cars cannot slip on the track.

Last summer I took a trip up a mountain, in a beautiful country across the water called Switzerland. That is a long name, isn't it? Let us try it once more—Switz-er-land.

There are a great many beautiful mountains in that country. They are called "The Alps." Now there are many different mountains which are really a part of the Alps. Each one of the larger peaks has a name. I was living at a little place down at the foot of one of the mountains. I had been having a very nice time looking at the pretty things in the Switzerland stores. There were some beautiful boxes, knives, book-racks, dolls, clocks, chairs, dishes, and many other things cut out of pieces of wood. And, do you know, those people over in Switzerland even carve pretty things out of bone. Perhaps you have seen things of this kind made of ivory. Sometimes in the winter the poor men and boys who live up among the mountains carve these lovely things out of ivory, bone, and wood, and then sell them. And the mammas and girls embroider very beautiful articles. That word "embroider" is a long word, and it means to work pretty figures on different kinds of cloth, sometimes with many-colored silks. The people who live in Switzerland are called Swiss. So this beautiful kind of sewing is called "Swiss embroidery." The people embroider handkerchiefs, dresses, waists, table-cloths, and many other things. Sometimes in the summer the mammas and big girls come down from

the mountains and sit in chairs on the sidewalk in front of stores and sew. People walking by often stop and look over the shoulder of the person working, for she is always making something very pretty. It is always fun to go into the stores in Switzerland, because there are things to look at unlike anything at home. The Swiss make ladies' pins, picture-frames, and so forth, out of little pieces of colored stones. They lay them together in pretty patterns.

Well, one day while I was staying in this little town, some of my friends said: "To-morrow morning let us go up the mountain on the train!" So the next day we started quite early, took our lunch with us, and walked to the little station. The cars of this train were rather short, and open on both sides so that all the pretty things out of doors could be seen. And there were many to see. The train went very slowly, so that everybody would have time to see everything out of the windows, and so that it would not run off the track. The train wound around and around these great high mountains so that the track looked like a snake. And sometimes we went right into and through the mountains. When you do this, you are in what is called a "tunnel."

There are a great many tunnels in Switzerland. There is one so long that it takes fifteen or twenty minutes to go through it. It is very dark in a tunnel, but often men light the lamps so it seems just as if it were evening, for it is so dark outside the train. It is very nice to come out into the daylight again and see the blue sky. There is a long tunnel in Switzerland which was built in a very strange way. A great many workmen began to dig at one end of the mountain, and some more men started at the other end. They worked very hard for many weeks until they met inside of the mountain. On the outside of this

very long tunnel, on top of the mountain, is a strange old building where some men have lived for many years. These men own some great dogs which go out in the cold and snow in the winter-time and find people who are lost on the mountains. The dogs are very brave and strong and have saved many people's lives. Wouldn't you love to have such a brave, fine dog?

Well, after we had travelled for about fifteen minutes up the mountain, we stopped at a little station. While our train waited, some children stood in a row near us and every one of them had something to sell. All of these little boys and girls are very poor, but they search on the mountains and find something which they hope people will buy. One little boy had gathered some wild strawberries. You all know what strawberries are. Well, *wild* strawberries are very small and very sweet. A little girl had a pretty stone to sell; her sister, a bunch of lovely Swiss grass; another had some soft white flowers, and a small boy had a bunch of roses which grow on the mountain-side. Many of these children live with their papas, mammas, brothers, and sisters in very small houses which have only two rooms. The house is set high on poles. Sometimes the papas take their cows and sheep to the mountains where there is good pasture, and stay all Summer. It is always a great holiday in Switzerland when the papas come home again in the Fall. Some of the men are farmers. While we were going up the mountain on the train, we looked out of the window and saw some farms on the side of the mountain. Have you all seen a farm? But you never saw one on the side of a mountain, did you? It looked very funny to see a man hoeing his potatoes halfway up a large hill or small mountain. We saw vineyards also. Vineyards are where grapes grow. When I saw men working halfway up these mountains on their

farms or vineyards, I thought they might tumble backward and roll down the mountain, but I am sure they never do. The train stopped at several stations, and little children always stood near the train with something to sell.

After we had ridden for about two hours, we looked out of the window and what do you suppose we saw? Snow! It was July and there was snow on the mountain even before we reached its summit. After we left the train and walked quite a long time, we reached the top, and then we saw much snow all around us. It looked very beautiful. The weather was quite warm on the mountain, and in the sun I took off my coat. Wouldn't it seem funny to you to see snowballing in July? Sometimes the snow melts very fast and rushes down the mountain, making pretty waterfalls. These are very long and very high and sometimes make a good deal of noise. There is a waterfall in Switzerland which is so high and big, and rushes down from the mountain so fast, that a little bridge was built with windows in it, so that people could stand inside without getting wet, for the waterfall splashed very high as it ran along. Sometimes it spatters against the windows of the bridge very, very hard. In the evening men light some red lamps near this waterfall, so that it looks like red water rushing along. It is very sparkling and bright.

I hope some day you can all take a trip up a mountain on a train. Everything looks very beautiful. The mountains are so high and the sunlight is bright on their sides. Flowers are to be seen everywhere, growing in the soft green grass, and their bright colors look very pretty. The sky is very blue and the snow is deep. Sometimes when you are up very high, you can look a long way off and see little towns at the foot of these great mountains, or beautiful lakes far away.

Many of these mountains are high and steep and dangerous, but some people like to climb them. I am sure I should never, never want to climb that kind of a mountain. I should be afraid I might get hurt. So many people want to go on top of them that there are men called "guides" to show them how to do it safely. The climbers have to wear very heavy shoes. The shoes have nails sticking out of the bottom of the soles. This is so that their feet will not slip on the ice or snow. They wear small hats that cannot blow off, trousers that reach to the knees, warm stockings, and every person carries a long, strong stick to help him climb. After they have gone up the mountain a long way and have reached the snow and ice where the climbing is harder, the guide ties the people together a long way apart. He then fastens the rope about his own waist. This saves the people from getting lost and helps them when they fall.

The people who live in Switzerland have a great deal of fun in winter. There are fine places to skate, and to go sleigh-riding and coasting. Sometimes the children sit on their sleds and coast for many miles. They think this is fine fun, and I am sure it must be.

Perhaps some day you may all go to Switzerland and see the things which I have told you about.

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A PLEA FOR THE FEEBLE-MINDED DEAF.

THIS is an age of marvelous achievement and progress in humanitarian undertakings, as well as in all branches of industry, research, and education. With liberal state support and generous endowments from wealthy promoters there is to-day hardly a single class of unfortunates who are not provided for to a greater or less extent. There is, however, one exception in the case of the feeble-minded deaf, for whom as a class there is, to our knowledge, no provision whatever either public or private. This remissness is obviously due not so much to neglect as to public attention not being drawn to the matter. Being a special class within a special class, it has been almost entirely overlooked.

It is not the purpose of this paper to present or outline a course for their care and training, but only to call attention to their status in this country with a view to having something definite done in their behalf. It is most desirable that those who have labored so long and successfully to bring the education of the deaf to such a high state of advancement and excellence should turn their attention to the needs of this neglected class of children, not only for their own benefit, but also for the good of the normal deaf, for a separation of the two is for the best interests of both.

The terms "feeble-minded" and "backward" are sometimes used as synonyms. Very often a feeble-minded child is classed as backward, and *vice versa*, so imperceptible does the dividing line between the two appear. No sharp distinction can be drawn, but before proceeding further we wish to indicate clearly to whom we refer by the term "feeble-minded." We cannot do better than quote the

classification of defectives as given by Dr. E. R. Johnstone, Superintendent of the New Jersey Training School for Feeble-Minded. He says:

"In the idiot development ceases at or before birth; in the imbecile it ceases in infancy; in the feeble-minded it ceases in early childhood; and in the backward child development is ordinary but the action slow. The feeble-minded child stops when he reaches the point where there are brain cells missing. The backward child will continue to progress as long as proper training is provided.

"Feeble-mindedness is a condition, not a disease, and is incurable. Feeble-minded children cannot be trained for life in the world. They may be self-supporting, but not self-directing. They are capable of a high grade of manual work, and often excel in certain lines of training. Under the wise direction of an institution they can do almost all manner of farm and household work; make mats, mattresses, clothing, and carpets, and care for their more helpless associates.

"The imbeciles are the middle-grade children. They do but very little intellectually; are good at industrial work and become the unskilled laborers in institutions or in the world. Their judgments are poor, will weak, reasoning unsound.

"The idiots are the lowest type. They are practically helpless and hopeless. They have but few desires and those only of the simplest kind."

So constantly are the feeble-minded deaf being brought to our notice by their applications for admission and by their presence in our institutions, that it is a problem which cannot much longer be ignored. About two years ago the Pennsylvania Society for the Advancement of the Deaf appointed a committee to inquire into the condition of the feeble-minded deaf of that State, with a view to obtaining for them equal benefits and privileges accorded the hearing feeble-minded; also to remove an added hindrance to the advancement of the already heavily handicapped normal deaf children, due to having the feeble-minded for school associates. We find that this helpless, neglected, and least attractive class of humanity is practically without any care and training whatever, except in isolated cases. The situation in other States is the same, we believe, as prevails in Pennsylvania.

In response to inquiries of heads of schools for the feeble-minded, we ascertained that in one institution there were twenty totally deaf feeble-minded, and a much larger number very hard of hearing. For want of funds to provide special arrangements for them they were graded with the hearing according to their degree of deficiency. They had no instructor who understood the deaf and could communicate with them. Scattered through different grades, they seldom had opportunities to associate even with one another. Thus were precluded the most essential factors in their development, encouragement, happiness, and cheerfulness. Aside from work in manual training and proper physical care, the benefit they received was next to nothing in comparison to the benefits the hearing were receiving. This arrangement was admitted to be very unsatisfactory, but was the best that could be done under the circumstances.

The superintendent of another institution for the feeble-minded informed us that about five years ago he knew of one hundred and fifty feeble-minded deaf-mutes. This institution at one time admitted a few of this class, but of late years has declined altogether to receive them, because they require special instruction for which there are no funds available. The situation as we found it did not reveal a single instance of a clear, definite method of training the deaf in any of the few schools for the feeble-minded where they are received. What little has been attempted is merely of an experimental character.

The records of the Pennsylvania Institution for the Deaf and Dumb show that during the past four years twenty-nine feeble-minded deaf were admitted. Several of this number were still in attendance during the past year on further trial; the others had been dismissed. In the Fall of 1908 fifty-one pupils were admitted. Of this number six, after a few months' attendance, were discharged as

actually feeble-minded, and one or two will not be allowed to re-enter the coming year for the same reason. This percentage of 13.72 defective entering pupils is extraordinary. We believe six or eight per cent. is nearer the usual number. Large as this percentage seems, it should, moreover, be remembered that all the feeble-minded deaf are not accounted for among new pupils entering a school for the deaf, for those known to be so afflicted when application is made for admission are debarred altogether, and yet still others never apply for admission at all.

One thing that should be and is constantly guarded against is receiving into schools for the feeble-minded children who are apparently mentally deficient, but seem so solely because of the fact that they are deaf and untrained. There are also familiar instances of the reverse being true—of hearing children being placed in schools on the supposition that they were deaf.

It is hardly necessary to state that a school for the normal deaf is not the proper place for the feeble-minded deaf. It is also impracticable to instruct them by the same methods and under the same conditions that exist for the hearing feeble-minded. Teachers do not understand them; and even though a teacher has had experience with both the deaf and the hearing, she could hardly be expected to make a success of an attempt to bring them together in a class and hope to have them profit by the same instruction. Of course, where a child is sufficiently near normal to profit by the course of training as given, and his deportment is such that he can be trained without detriment to the other children, he should be permitted to remain for a limited number of years, or until he has received all the training that it is possible to obtain. Such has been, and is, the custom of most schools for the deaf. But instead of then transferring him to a school for the feeble-minded, because

there is none for him, he is returned to his parents or friends there to drag out a miserable existence the remainder of his days, unless they are in circumstances to give him proper and intelligent care.

Among the superintendents of schools for both the deaf and the feeble-mided, and also among prominent educators whom we have consulted, the consensus of opinion is that the ideal arrangement would be to place this class of defectives in a separate institution for their special care, or, if that is not practicable, in separate departments in a school for mental defectives, with teachers experienced in work with both the deaf and the feeble-minded. Any individual should be placed where his predominating defect is treated. This being the case, a feeble-minded deaf child should go to an institution for the feeble-minded, not to a school for the deaf, there to receive whatever training is most suitable for his particular condition. Moreover, the feeble-minded deaf should be separated from the normal deaf for the same reason that the feeble-minded hearing are separated from the normal hearing.

We must remember that it is the normal child who suffers most from association with the sub-normal who is unable to follow the class work. The special child receives more than his share of the teacher's and supervisor's time and attention, and does not profit by it sufficiently to justify the loss to the others. This condition is to some extent obviated in some of our schools for the deaf by maintaining special classes for backward and feeble-minded children. But the great injustice to the normal child, it seems to us, lies in the fact that in schools for the deaf where the feeble-minded are retained, they are unable to advance farther than the lower grades, and their influence upon the moral growth of younger pupils is very detrimental.

Could the feeble-minded deaf child have proper training

in a well equipped department, or even in a class with teachers trained to undertake his instruction, he might have the best that is in him developed, be given employment and entertainment best suited for him, be disciplined to better living, have an environment best suited to his needs, and possibly become self-supporting.

The aim should be to make him realize as far as possible his responsibilities to himself and others, and be able to fill his little niche in the institutional world, and later, if possible, the world in the larger sense. Otherwise, he will be a menace and source of anxiety and distress to both his family and the community.

General development, instead of education in the usually accepted sense of the word, should be the object, with physical and manual training as important factors.

In view of these conditions, it is surely time something was done in behalf of these afflicted children. The paramount question involved, beyond the humanitarian side, is the matter of expense. Many States are already overburdened with taxation. It may be impossible at present for some to give these unfortunates a separate school, and in others there may not be a number sufficiently large to justify the expenditure, but a separate department in a school for the feeble-minded seems entirely feasible. Should some States deem even this a burdensome outlay, why not urge special classes for them?

There seems to be no question whatever but that it is far more economical in the end to place these children in the custody of institutions than to permit them to remain at large. It is generally conceded that not more than five per cent. of them ever become fitted to take their place in a community, provide for themselves, and meet their obligations as citizens. To retain permanent custody of the other ninety-five per cent. may seem an extraordinary burden to

the State, and the question may be asked, Does it pay? It certainly does. It would be little less than a crime to send them into society utterly incapable of realizing their responsibilities or even providing for their own needs. The injury they would do, the cost of handling cases of crime in which they would figure, and the inevitable increasing of their numbers would involve in the end greater expense than would be required for permanent custodial care.

By retaining them in institutions for children and then transferring them to homes for adults, they would practically support themselves, either at manual labor or by caring for others more helpless.

With proper training and *under direction of others* about thirty per cent. of the feeble-minded may be made self-supporting, which means capable of doing at least one third of the work of an ordinary person. On these grounds the plea is made that there should be homes for adults or those beyond school age.

With a small beginning greater recognition of the need of provision for the feeble-minded deaf will, we are certain, eventually come to us in the form of a separate department or a separate school. We should not forget our own small beginnings in establishing schools for the deaf, and taking courage from the past successes trust that we shall come to the point of providing for and training the feeble-minded deaf in a practical way and at reasonable cost.

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THE SENSES OF THE BLIND-DEAF.*

A VERY interesting paper on the above subject appears in a magazine here, apparently a translation of a paper by Mr. M. Kunz of Illzach-Mühlhausen, originally published in Europe.

Mr. Kunz shows clearly, by his careful reports and analyses of certain carefully conducted experiments on the blind and the sighted, that the old fallacy, that the deprivation of one sense is measurably balanced by increased development of the remaining senses, is a thorough fallacy. I have long held this view myself, my experience of fifty years as a manufacturer having shown me that machinists make their accurate "fits," not by sight, but by touch; that the micrometers, measuring much less than one one-thousandth part of an inch, depend on the sense of touch of the user, sight only reading what touch has measured; or as many of us know when we take hold of two thicknesses of thin paper, when we wanted to hold only one. Instances of this kind could be multiplied indefinitely.

I must take an exception to Mr. Kunz's treatment of the myth that the blind can distinguish colors by touch. That fallacy is so evidently an impossibility that it hardly needs refutation; colors are cognizable only by the sight. It *is* a fact that the blind *do* distinguish between yarns of different colors, but only by the different dyes differently affecting the textures of the yarns. A blind lady put the matter very clearly by saying, "I can distinguish some colors in yarns, but cannot do so in beads."

*From *Eos* for July, 1909.

Mr. Kunz clearly shows the fallacy but would have done well to show that difference in texture is the indication by which the deaf-blind are guided.

The blind do one thing naturally and without any teaching, even very young girls doing it under circumstances that preclude the possibility of their having been taught it, *viz.*, threading their needles by the lips. A blind-deaf untaught young girl, with no language, was found to be doing it. The process is very simple; the thread is moistened in the mouth, laid along the needle from the point of the same, the end of the thread not reaching the eye of the needle; then laid on the lips and drawn out of the mouth (with very fine thread, usually laid on the tongue). The rough surface of the thread is more retarded by the friction of the lips than the moving needle, hence it is forced toward the eye; when it gets there, it is blocked by the lips beyond, and turns up through the eye. But the puzzle is: How does this suggest itself to the mind of a girl of seven years?

But Mr. Kunz's experiments on the sense of smell were fatally defective—at least would have been so had some blind-deaf persons been tried. Mr. Kunz (or whoever the experimenter was that carried them out) only tested the distances at which the blind and the seeing recognized odors; any one of long experience with hounds and other dogs could have told him that the finest tracking bloodhound cannot smell meat any further than any non-tracking dog. Yet it certainly is the fact that hounds, hunting dogs, and many blind-deaf can distinguish odors completely imperceptible to other dogs, or to the vast majority of seeing-hearing persons. I saw a foxhound pick up the trail of a fox when reeking with the odor of the skunk she had just killed, the most overpowering animal odor known. Setters and pointers will "point"

game as readily when close to the leeward of the rotting carcass of a cow as they will elsewhere.

Many of the blind-deaf know when a friend comes near them, even if they have not met that friend for years. An experiment I tried on Leslie Oren (one of many others), a blind-deaf boy of 15 or 18 years of age, at the Columbus, Ohio, School, seems to me to be as complete a demonstration of the power of smelling in his class as can readily be thought of. I took the blank half of a letter I received, got an envelope of a kind never used by me, took off coat and vest, washed hands and face with perfumed soap, enclosed the paper in the envelope and mailed it to Mrs. Cureton (Leslie's teacher), asking her to send it to her husband to use in writing to her, and when received by her to try if Leslie knew who it was from.

As it happened Mr. Cureton was in Columbus when the test letter arrived. So he kept it in his pocket for an hour or two, gave it to the Superintendent of the school, who gave it to Leslie, who smelt it and instantly signed "Mr. Wade has been writing to Mr. Cureton!" Note that Leslie not only recognized the personal odors of myself and Mr. Cureton, with an unknown number of other persons' odors on the envelope, but he perceived that I wrote to Mr. Cureton, not the reverse order!

Then, again, some of the deaf and the blind-deaf can read manual spelling *in* their hands, *on* their hands, arms, cheeks, backs, anywhere, and some have read it on their knee or heel! When read in the hand, we think (but really only guess) that they perceive the positions of the fingers, but that is impossible when it is read on the heel, knee, back, etc. But still more remarkable is it that some can read manual spelling by clasping their hands around the speller's wrist (the sighted-deaf with shut eyes).

Now all these facts suggest two considerations. The

blind and the seeing deaf have not developed greater senses of touch or smell than others; but is it not probable that they have developed a greater concentration of mind on these senses than the seeing-hearing have, and thereby recognize odors and motions imperceptible to others?

To come back to the smell matter—"Scent Problems" are the most inscrutable known, if we view them as the action of ponderable matter. How can we explain a strong odor being obliterated by a much weaker one, in any conception of ponderable matter? Or that very faint odors are readily cognizable in the presence of overpoweringly strong ones? Or that the scent of a particular man being given to a bloodhound, then the man mounting a bicycle, and when the hound is led to the path of the bicycle, fifty yards from where the man mounted, he instantly takes, and follows, the trail? Or that a dog coming on the track of a vehicle its master is seated in, follows the trail by smell? Or that Leslie Oren knew that "Mr. Wade has been writing to Mr. Cureton?" Or that a trail—say of a deer—on soft ground, then instantly cognizable by hounds, cannot be discerned by the same when the ground freezes, but regains full force when the ground thaws? Or the singular fact stated by Miss Helen Keller in "The World I Live In," that very young babies have no distinctive odor by which they can be recognized? We know that babies *do* "smell" differently to us, and they must do so to Miss Keller; but the distinct personal odor by which bloodhounds trail, and the blind-deaf recognize friends, is absent; and the difference between this personal odor, and what *we* mean by "smell" must be one *of kind*, not merely of degree.

Now if the theory of wave-motion be accepted as the cause of smell, the foregoing facts seem readily explainable. The waves of the faint odor may exactly counteract those

of the strong one, hence no wave motion; they may differ enough to not coincide with those of the stronger, hence we have motions; both of these facts are well known in sound-waves.

The freezing of the ground locks up the scent motions of the deer; hence there are no scent waves. The man's scent waves travelled over the whole of the bicycle; hence the ground received them from the bicycle. The same with the owner of the dog when he was in the vehicle. Or that my scent-waves differ enough from Mr. Cureton's for Leslie to distinguish them (although I confess that I am utterly "out of reason" to explain how Leslie knew that my scent on the envelope was older than Mr. Cureton's). Or that young babies have not yet developed what for convenience I call *scent* motions although they have the waves of "*smells.*"

I would suggest the inquiry whether the native Australians *smell* at the trails they are so remarkably skillful in following. And do idiots or the feeble-minded show any superiority in the sense of smell?

It strikes me that Mr. Kunz's statement that the destruction of one sense impairs all must be taken as far from proved.

The long and short of it is: When you attempt to consider scent problems, banish every preconception of *smells* from your mind; if you do not, you will be befogged the first step you take.

WILLIAM WADE,
Oakmont, Pennsylvania.

NITCHIE, EDWARD B. Lessons in Lip-Reading for Self-Instruction. Revised Edition. New York: Surdus Publishing Co. 1909. 8vo, pp. 133.

Many teachers are already familiar with Mr. Nitchie's book on lip-reading published five years ago. He now sends out a revised edition of this book, enlarged and improved in several ways. As the author says, "it has been practically re-written from cover to cover." A "Teachers' Handbook" accompanies this edition. In this handbook the directions and explanations are made so clear that even the inexperienced assistant can be of service. If one cannot have the experienced teacher this is the next best thing.

The book covers a great deal of ground, and the student who becomes familiar with its contents as seen on the lips can call himself a very good lip-reader. The drill work is thorough. There is a long list of colloquial sentences and many stock forms and phrases. Stories are introduced from the first which keep up the interest and lighten the drudgery of beginning work.

The teacher of lip-reading to the deaf as well as the teacher of lip-reading to the hard of hearing will find this book a help.

Even if he has his own plan of work this is a good book to "fall back on." Sometimes even the ready tongue of the teacher of lip-reading falters for want of a subject of conversation. One glance into the pages of this book will give him material for an hour's work.

Mr. Nitchie's ability to read the lips, for he is hard of hearing, should encourage all those who are in need of taking up the study of lip-reading.

KATE H. FISH,
Principal of the Pennsylvania Oral School,
Scranton, Pa.

BOYER, AUGUSTE. Le Français par l'Image, 600 gravures, pour le tout premier enseignement du langage oral et écrit [French through Pictures, 600 engravings, for the very first instruction in oral and written language]. Third edition. Paris: Ch. Delagrave. 1909.

The first edition of this excellent work was noticed in the *Annals* 1, 327, and the second edition 1, 429. The present edition makes the number of copies printed in French six thousand. The book has also been adapted for teaching Portuguese by Mr. Trindade, Director of the Institution at Porto, under the title "*O Portuguez pela Imagen*," and for Spanish by Mr. Garcia, Director of the Mexico Institution, under the title "*El Español por Medio de Imagines.*"

An additional volume by the same author, for the second stage of instruction in French, and a book of "*Leçons sur les connaissances usuelles*," by Messrs. Boyer and Pautré, are soon to be issued by the same publisher.

COLOMBO, FAUSTO. Appunti di Insegnamento Pratico ai Sordomuti, I. Dell' Accento Tonico [Notes upon the Practical Instruction of Deaf-mutes. I. On Syllabic Stress]. Varese: Eredi Macchi. 1909. 8vo, pp. 77.

The author of this work is an instructor in the Royal National Institution at Milan, Italy. The present volume is the first of a proposed series relating to the instruction of the deaf. The subjects of which it chiefly treats, rhythm and syllabic stress, are so different in Italian speech from English that the author's practical suggestions apply only in a general way to the teaching of the deaf in America. He does not approve of preparatory exercises of the tongue and lips without sound, for the purpose of obtaining elasticity of these organs, regarding such exercises as useless and even dangerous; but he attaches great importance to preparatory exercises in breathing, and to the use of graphical signs in teaching rhythmic values, accent, etc. for instance:

In teaching lip-reading he would pay special attention to those inner movements of the vocal organs which are least visible and, therefore, most difficult to distinguish. The teacher's speech should always be clear and distinct, but natural and free from exaggeration. The teacher should understand and obey the laws that govern the relations of time in the psychical functions of perception and reaction.

The author does not approve of attempting to give the deaf a large vocabulary, especially in the early years of instruction; he would rather they should have a comparatively limited range of expression and comprehension, but this he would make as perfect and unerring as possible.

Of the present state of the instruction of the deaf in Italy he takes rather a pessimistic view. "Deaf-mute instruction," he says, "is still in its infancy; it wanders in a vicious circle; it is fettered by conventionality. Our schools attempt to give the pupils speech at any cost without regard to the rational, gradual development of the mind. Their sole result is to produce at the end of the course a speaking machine whose knowledge is not well assimilated, whose language is almost unintelligible, and who can scarcely communicate with any one except his own teacher."

The only hope of remedy for this state of affairs he finds in the training of a more competent body of teachers; and that this may be brought about he demands "reform in the requirements of admission to the normal school; reform and amplification of the course of study pursued by normal students; increase in their hours of instruction; daily training for them that shall be real, practical, and serious, under the guidance of a professor of pedagogy, with the aid of experienced teachers in the several classes and the various grades."

FERRERI, GIULIO. Documenti per la storia dell' educazione dei sordomuti [Documents relating to the history of deaf-mute education]. Milano: 1909. 8vo, pp. 86.

Mr. Ferreri, Director of the Royal Institution at Milan, is doing an excellent work in collecting and editing various publications, some of them rare, relating to the education of the deaf. The three volumes previously published contain (1) several letters by Dr. John Wallis, professor at Oxford in the seventeenth century, translated from the English; (2) two articles by Dr. Ernst Adolf Eschke, first director of the Berlin Institution, translated from the German; and (3) a treatise by Dr. Wilhelm Gude, formerly director of the Stade Institution, on the physiological and psychological laws governing the origin of the motions and the instruction of the deaf, translated from the German.

The principal document in this, the fourth volume of the series, is a letter written by the Jesuit Abate Giovanni Andres in 1793 on the origin and history of the art of teaching deaf-mutes to speak (*Dell' origine e delle vicende dell' arte d'insegnare a parlare ai sordomuti*).

Andres was born in Spain in 1740, was banished from that country with other members of his Order, and afterwards lived in Italy and wrote in Italian, his principal work being a treatise on the origin, progress, and present state of all literature. He died at Rome in 1817.

In this letter, which is addressed to the wife of the Spanish Ambassador, his strong patriotism leads him to exalt Pedro Ponce above all other teachers of the deaf and to protest against the praises bestowed by his contemporaries upon De l'Epée.

Mr. Ferreri enhances the value of the work by giving full citations of Andres's references to other authors from Aristotle to Buffon and adding instructive annotations of his own.

WILLOUGHBY, J. EVELYN. Written Exercises on Direct and Indirect Quotations. Published by the American School for the Deaf, Hartford, Conn. 1909. 12 mo, pp. 166.

In these exercises, prepared by an instructor in the Clarke School, the American School at Hartford adds another excellent text-book to the list of its publications.

Miss Willoughby acknowledges her indebtedness to Mrs. Anna C. Hurd's justly esteemed article on "Asked, Said, Told" (*Annals*, xxxvii, 94–103), as the basis of her work, but the ingenuity with which the plan is carried out and the great variety of language forms introduced give the book a value of its own.

Attractive pictures provide material for conversation, while numerous sentences referring to the pictures afford abundant practice in the constructions, so difficult for the deaf and for foreigners, used in changing the forms of the English language from direct to indirect discourse and *vice versa*. This important field of language work is fully covered by these exercises, which judicious teachers will not only use with gratitude, but will take as models for original work adapted to the requirements and capacities of their respective classes.

OTHER PUBLICATIONS received are: Report of the Association for Oral Instruction (London, 1909); Ninety-ninth Report of the Edinburgh Institution; Eighty-eighth Report of the Glasgow Institution; Report of the Vänersborg School for 1908–9; Report of the Waratah, N. S. W., Institution for 1907–8; Report of the Twenty-second Meeting of the Pennsylvania Society at Lancaster, 1908; Seventh Report of the Pennsylvania Home at Doylestown; *Compte Rendu des Fêtes* (on the occasion of a visit to Paris of a company of deaf people from Great Britain last July), by HENRI GAILLARD, Tours, 1909.

SCHOOL ITEMS.

Illinois School.—Miss Edna Shirley, who has taught in the Mackay, Florida, and Central New York Institutions, and Miss Ella Cannon, of Jacksonville, are appointed teachers. Miss Elva M. Charles, who taught last year in the Colorado School, returns after a year's absence.

Kansas School.—Miss Gertrude Putnam has resigned to pursue the study of art, and Miss Frances Wheeler, kindergarten teacher, has resigned, the kindergarten department being discontinued. Miss Clare Montgomery, a teacher in the Olathe public schools, is added to the corps of instruction.

Maine School.—William H. Brownson, President of the Board of Trustees, died September 6, 1909. He had devoted much time and effort to the welfare of the School and one of its buildings was named in his honor.

Miss Grace Gorsline, from the Normal School at Oswego, New York, is appointed teacher of sloyd and drawing, and Mr. Herbert S. Johnson, from the Normal School at Gorham, Maine, teacher of cabinet work, wood carving, and modeling.

Manitoba Institution.—Duncan Windell McDermid, Principal of this Institution for the past nineteen years, died September 12, 1909, aged fifty-one, of heart failure.

Mr. McDermid was of Scottish ancestry. He was born in Martintown, Ontario, and was educated in the public schools of that Province. In 1870 he entered the Ontario Institution at Belleville as clerk and afterwards was appointed a teacher. He taught there for five years and in the Iowa School for eight years. Under his direction the Manitoba Institution increased greatly in numbers and maintained a high standard.

He was prominent in civic and charitable work in Winnipeg, being president of the Associated Charities, director of the General Hospital, and president of the Manitoba Club. He

had formerly been president of the Golf Club and the Country Club. His genial disposition, winsome personality, administrative ability, and high character made him a leader in these and other activities, but no outside interests were allowed to interfere with his work for the deaf. He was a good teacher and excellent superintendent. For several years he was a member of the Executive Committee of the Conference of Superintendents and Principals.

Howard J. McDermid, M. D., son of the late Principal, has been appointed his successor.

Michigan School.—Miss Florence Thayer, an oral teacher, and Mr. E. M. Bristol, teacher of printing, have resigned. Mr. Arthur P. Buchanan, from the Minnesota School, and Miss Margaret Mary Leveck, a graduate of Gallaudet College, are appointed teachers. Mr. James M. Stewart takes Mr. Bristol's place in conducting the *Mirror.*

Oklahoma School.—The publication of a paper appearing weekly during the school year has been begun. It is called the *Deaf Oklahoman.* The price is 50 cents a year.

Oregon School.—Mr. George W. Halse, who has been a teacher in this School for nine years and formerly taught in the Ohio School for twenty-six years, has retired from the work. Miss Mary MacNamar has resigned to be married, Miss Lillian Rhoads to teach in the Ohio School, and Miss Imogen Lindsley on account of poor health. Miss Hermine M. Haupt, from the Maryland School; Mrs. Lillian Paddleford, from the Kentucky School; Miss Etta Rector, from the Arkansas Institute; Miss Lois Montgomery, trained in the Nebraska School; Miss Harriet D. Williams, a graduate of the University of Kansas and a teacher in the public schools for four years; and Mr. Frank C. Horton, a graduate of Gallaudet College, have been added to the corps of instructors.

Rhode Island Institute.—Miss Marion C. Hill has resigned to be married; Miss Ellen Woodcock to take a much needed rest; Miss Sybil Richards to teach in the Central New York Institution; and Miss Urania H. Sturdevant to teach

in the Pennsylvania Institution. Miss Lina Hendershot has been added to the teaching force.

Washington State School.—Miss Blanche Van Deveer, trained in the Indiana School; Miss Ethel Owens, of Kentucky; and Miss Amanda Davis, from the Arkansas Institute, have been appointed teachers.

West Virginia School.—Mr. James T. Rucker, who has been Principal for twelve years, has resigned the position, but will remain in charge until his successor is appointed.

Mr. John A. Boland, a teacher for the past eighteen years, has resigned on account of poor health.

Wisconsin School.—Mrs. Alice S. Fischer has resigned and Miss Viola Harwood, a graduate of the Normal School at Whitewater and a teacher of two years' experience, has been appointed a cadet.

Mr. E. W. Walker, Superintendent, has been elected President of the Delavan Lake Assembly.

The old manual training school has been remodelled, making it a part of the girl's new dormitory, and many other improvements have been made during the summer.

ADVERTISEMENTS.

Bureau of Information.

The Convention of American Instructors of the Deaf maintains a free Bureau of Information for the use of superintendents and principals seeking the services of teachers and officers, and for teachers, matrons, and supervisors desiring positions.

The Bureau keeps on file the names of all applicants for positions in schools for the deaf, together with information as to length of service, work desired, salary expected, etc. It endeavors to give prompt and accurate replies to all requests for information.

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PERCIVAL HALL, *Secretary*,
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